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ABSTRACT

This paper describes how individual teachers, who were the target of an implementation effort, changed over a two-year period in their use of and concerns about a new approach to discipline. The main focus of this paper is the measurement of the change process, in contrast to other papers that describe the change effort and analyze the interventions made. Two variables used to monitor changes in individuals involved in the implementation effort are major dimensions of the Concerns-Based Adoption Model (CBAM): Stages of Concern About the Innovation (SoC) and Levels of Use of the Innovation (LoU). SoC data were collected six times and LoU data five times. Changes in teacher concerns and use levels over the course of the implementation effort were measured and analyzed for the 42 teachers who had participated in the program throughout its two-year duration. The findings report (1) changes in the variables (LoU and SoC) of the entire sample between data collection periods; (2) how changes in the variables of teachers who eventually became nonusers of the program differ from those who remained users; (3) differences in the variables between different teaching teams; and (4) patterns in the changes in the variables of the individuals within the sample. (Author/MLF)

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EXAMINATION OF THE IMPLEMENTATION OF A JUNIOR HIGH SCHOOL'S NEW APPROACH TO DISCIPLINE BY LONGITUDINAL ANALYSIS OF CHANGE IN TEACHERS' STAGES OF CONCERN AND LEVELS OF USE

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EXAMINATION OF THE IMPLEMENTATION OF A JUNIOR HIGH SCHOOL'S NEW APPROACH TO DISCIPLINE BY LONGITUDINAL ANALYSIS OF CHANGE IN TEACHERS' STAGES OF CONCERN AND LEVELS OF USE[1]

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Educational change is indeed a complex phenomenon; the study of change is challenging because it must try to understand and account for the complexities. A multitude of case studies have been written in efforts to understand what makes change occur or not occur. These case studies rely heavily upon qualitative, descriptive data, detailing settings, motivations, decision-making, major strategies, and events that take place, largely from the organizational perspective. Rarely have individuals within the system been monitored so that these descriptions can be tied to actual changes in human feelings and behaviors, which, after all, are the goals of most educational change efforts.

This paper is one of several (see also Hall, Zigarmi & Hord, 1979; Hord, 1979; Rutherford, 1979; Zigarmi & Goldstein, 1979) describing a research effort that proceeded one step further than typical case studies of change efforts. The study not only documented, using qualitative methodologies, events of the implementation, processes that took place, individual perspectives and activities,

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[1]The research described herein was conducted under contract with the National Institute of Education. The opinions expressed are those of the authors and do not necessarily reflect the position or policy of the National Institute of Education. No endorsement by the National Institute of Education should be inferred.

but it also introduced two dependent variables to use in monitoring the process. These two dependent variables allowed for the objective and periodic measurement of changes in individuals as the organization planned and moved towards use of an innovation.

The study reported in this paper took place in an urban junior high school in the midwest. The goal of the school's change effort was to replace the traditional corporal punishment approach to discipline with a set of new, more positive discipline strategies based on Glasser's Reality Therapy (1969). The focus of the study was to explore the effects of interventions made by those responsible for the change effort. Interventions were documented and individual change monitored over a two year period.

This paper describes the changes that occurred in individuals (i.e. teachers) in the junior high school over the course of the change effort. These changes will be described in terms of the concerns of the individuals about the new approach to discipline, and their actual use of the new program. Other papers describe the change effort itself (Hord, 1979; Zigarmi, 1979) and analyze the interventions made (Hall, Zigarmi & Hord, 1979; Rutherford, 1979). It is hoped that, together, this set of papers create a rich, in-depth picture of an effort at school improvement, an effort which can help those concerned with educational change to more effectively and sensitively plan and implement change in schools.

Methodology

In this study, two variables were used to monitor changes in individuals involved in the implementation effort -- Stages of Concern About the Innovation (SoC) and Levels of Use of the Innovation (LoU). These two variables are major dimensions of the Concerns-Based Adoption Model (Hall, Wallace & Dossett, 1973), a model of the change process that has been the focus of study at the Texas R&D Center for the past five years. The model views the individual as of primary importance in the change process and focuses on the individual as the

major unit of analysis. The model is based on the assumption that institutions cannot change unless the individuals within them change. Another assumption is that change is a process that occurs over time, and one which is experienced by each individual differently. There are, however, predictable patterns to how individuals experience the process, both in terms of their feelings about the change, and their skills related to the change. These feelings and skills can be assessed and used as a basis for determining what kinds of help and support might be most appropriate during the implementation effort.

Seven Stages of Concern About the Innovation have been defined (see Figure 1). These range generally from concerns about self (how will it affect me?) through concerns about the task (will I ever get this program organized?) and finally to concerns about the impact the program has on students (how is the program affecting them?). The groundwork for this theory was laid by Frances Fuller (1969) who studied concerns of student teachers about teaching. The seven Stages of Concern have been developed and initially verified through extensive study of numerous innovations in schools and colleges across the country (Hall & Rutherford, 1976; Hall, 1976; Loucks, 1977; Hall & Loucks, 1978).

Stages of Concern are measured using a 35-item Likert-type Stages of Concern Questionnaire (Hall, George & Rutherford, 1977), which has weathered intensive reliability and validity studies, and has been used extensively for the past five years. Scoring the questionnaire produces a profile of seven scores, i.e, a percentile score for each of seven concern stages. Individual profiles can be plotted, or data can be aggregated for the development of group profiles, such as for teams, grade levels, schools, and departments.

The second major variable, Levels of Use of the Innovation, describes the behaviors demonstrated by individuals as they become increasingly more familiar with and skilled in using an innovation. Eight Levels of Use, described in Figure 2, have been defined (Hall, Loucks, Rutherford & Newlove, 1975). Levels

Figure 1

STAGES OF CONCERN:
TYPICAL EXPRESSIONS OF CONCERN ABOUT THE INNOVATION

STAGES OF CONCERN		EXPRESSIONS OF CONCERN
6	REFOCUSING	I HAVE SOME IDEAS ABOUT SOMETHING THAT WOULD WORK EVEN BETTER.
5	COLLABORATION	I AM CONCERNED ABOUT RELATING WHAT I AM DOING WITH WHAT OTHER INSTRUCTORS ARE DOING.
4	CONSEQUENCE	HOW IS MY USE AFFECTING KIDS?
3	MANAGEMENT	I SEEM TO BE SPENDING ALL MY TIME IN GETTING MATERIAL READY.
2	PERSONAL	HOW WILL USING IT AFFECT ME?
1	INFORMATIONAL	I WOULD LIKE TO KNOW MORE ABOUT IT.
0	AWARENESS	I AM NOT CONCERNED ABOUT IT (THE INNOVATION).

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Figure 2

LEVELS OF USE OF THE INNOVATION: TYPICAL BEHAVIORS

LEVEL OF USE		BEHAVIORAL INDICES OF LEVEL
VI	RENEWAL	THE USER IS SEEKING MORE EFFECTIVE ALTERNATIVES TO THE ESTABLISHED USE OF THE INNOVATION.
V	INTEGRATION	THE USER IS MAKING DELIBERATE EFFORTS TO COORDINATE WITH OTHERS IN USING THE INNOVATION.
IVB	REFINEMENT	THE USER IS MAKING CHANGES TO INCREASE OUTCOMES.
IVA	ROUTINE	THE USER IS MAKING FEW OR NO CHANGES AND HAS AN ESTABLISHED PATTERN OF USE.
III	MECHANICAL USE	THE USER IS USING THE INNOVATION IN A POORLY COORDINATED MANNER AND IS MAKING USER-ORIENTED CHANGES.
II	PREPARATION	THE USER IS PREPARING TO USE THE INNOVATION.
I	ORIENTATION	THE USER IS SEEKING OUT INFORMATION ABOUT THE INNOVATION.
0	NONUSE	NO ACTION IS BEING TAKEN WITH RESPECT TO THE INNOVATION.

of Use have been previously studied in both cross-sectional and longitudinal research efforts in schools and colleges across the country, using a wide variety of innovations (Hall & Loucks, 1977a; Hall & Loucks, 1977b; LaShier, 1977).

Levels of Use are measured using a focused interview procedure (Loucks, Newlove & Hall, 1976). Reliability has been previously established through the rating of interview tapes, and a validity study utilizing an ethnographic methodology has affirmed that the special focused procedure eliminates the problem of self-report (Hall & Loucks, 1977b). After the interview is assessed, the individual is assigned a Level of Use for the time of assessment; an aggregate, group profile gives the distribution of Levels of Use within the institution.

In the present study, Stages of Concern data were collected six times: September, 1976, January, April, August and October, 1977, and April and September, 1978. With the exception of August, 1977, Levels of Use data were also collected at these periods.

Findings and Interpretations

In this study, changes in teacher concerns and use levels over the course of the implementation effort were aggregated and analyzed for all teachers who had participated in the program throughout its two-year duration (N = 42). The data were also analyzed by smaller units in anticipation that this might shed some light on how certain groups of individuals differed in their patterns of change. Findings are reported as responses to the following questions:

1. How did the Levels of Use and Stages of Concern of the entire sample of teachers change between data collection periods?

2. How did the changes in Levels of Use and Stages of Concern of teachers who eventually became nonusers of the program differ from those who remained users?

3. Are there differences in Levels of Use and Stages of Concern of different teaching teams?

4. Are there discernable patterns to the changes in the Levels of Use and Stages of Concern of individuals within the sample?

In addition to responding to these questions by reporting the longitudinal data, this section proposes tentative interpretations of results.

1. How did the Levels of Use and Stages of Concern of the entire sample of teachers change between data collection periods?

Levels of Use Data. Figure 3 presents the Levels of Use (LoU) distribution for the sample for each of the five data collection periods. In September, 1976, all subjects were classified as users (LoU III or above), and the large majority were at LoU III, Mechanical use. Again, in January, 1977, the greatest number of teachers were at Mechanical level, indicating the difficulty they were experiencing in managing innovation requirements. At the January data collection period, 7% of the subjects were nonusers (LoU 0 to LoU II).

The data collection periods of April, 1977, October, 1977, and April, 1978, present a rather clear picture of what ultimately happened regarding subjects' use of the new approach to discipline. The number of subjects classified at the Mechanical level dropped significantly from 21% to 7% over that year. The high proportion of the sample, (nearly one-third), in April and October, 1977, that were at LoU IVB, Refinement level (or higher) reflects that a significant number of teachers were making changes in their use of the innovation to increase impact on students.

By April, 1978, the majority of the subjects (57%) were using the innovation routinely (LoU IVA Routine). However, 19% were also classified as nonusers at this time.

Stages of Concern Data. One premise of the Concerns-Based Adoption Model

Figure 3

Levels of Use Distribution for Individuals Remaining in the Sample (N=42) Over the Five Data Collection Periods

	Data Collection Periods				
Level of Use	9/79	1/77	4/77	10/77	4/78
0	-	7%	12%	7%	19%
I	-	-	2%	17%	-
II	-	-	-	-	-
III	74%	43%	21%	7%	7%
IVA	17%	40%	36%	39%	57%
IVB	7%	5%	14%	10%	2%
V	2%	5%	12%	20%	14%
VI	-	-	2%	-	-

is that Stages of Concern 0, 1, and 2 will be higher for individuals who have not begun to use an innovation. When use begins, Stage 3 Management concerns should rise higher than the other stages. When Management concerns have been dealt with and reduced, it is theorized that Stages 4, 5, and 6 concerns will rise. Figure 4 illustrates this hypothesized "wave motion" (Hall, 1977). The wave motion is confirmed in part by the data reported in the following paragraphs.

The first SoC Questionnaire was collected in September, 1976, before teachers held their first class meeting, i.e., technically before they became "users". At that time, Stages 0, 1, and 2 concerns were higher than those at other stages (see Figure 5). The LoU ratings at the same test period showed all subjects to be users but, actually, they had engaged in only one aspect of the innovation.* At each of the remaining data collection times, the pattern was observed of decreasing concern levels on Stages 0, 1, and 2. Stage 3 concerns did not intensify significantly over time, nor did they decline significantly until April, 1978. It is important to note that with the exception of Stage 0, Stage 3 concerns were consistently higher than the other stages, probably indicative of the management difficulties posed by this particular innovation.

A look at the scores on Stages 4-6 over the six collection periods reveals that there was no upward movement in those scores, as might be expected after two years of use. In fact, scores on Stages 4 and 5 moved lower rather than higher. Only Stage 6 scores increased over time.

*In September, 1976, subjects were considered users if they had conducted a class meeting. At all other data collection periods, more stringent criteria for use were applied, requiring demonstration of more than this one aspect of Reality Therapy.

Figure 4

Hypothesized Development of Stages of Concern

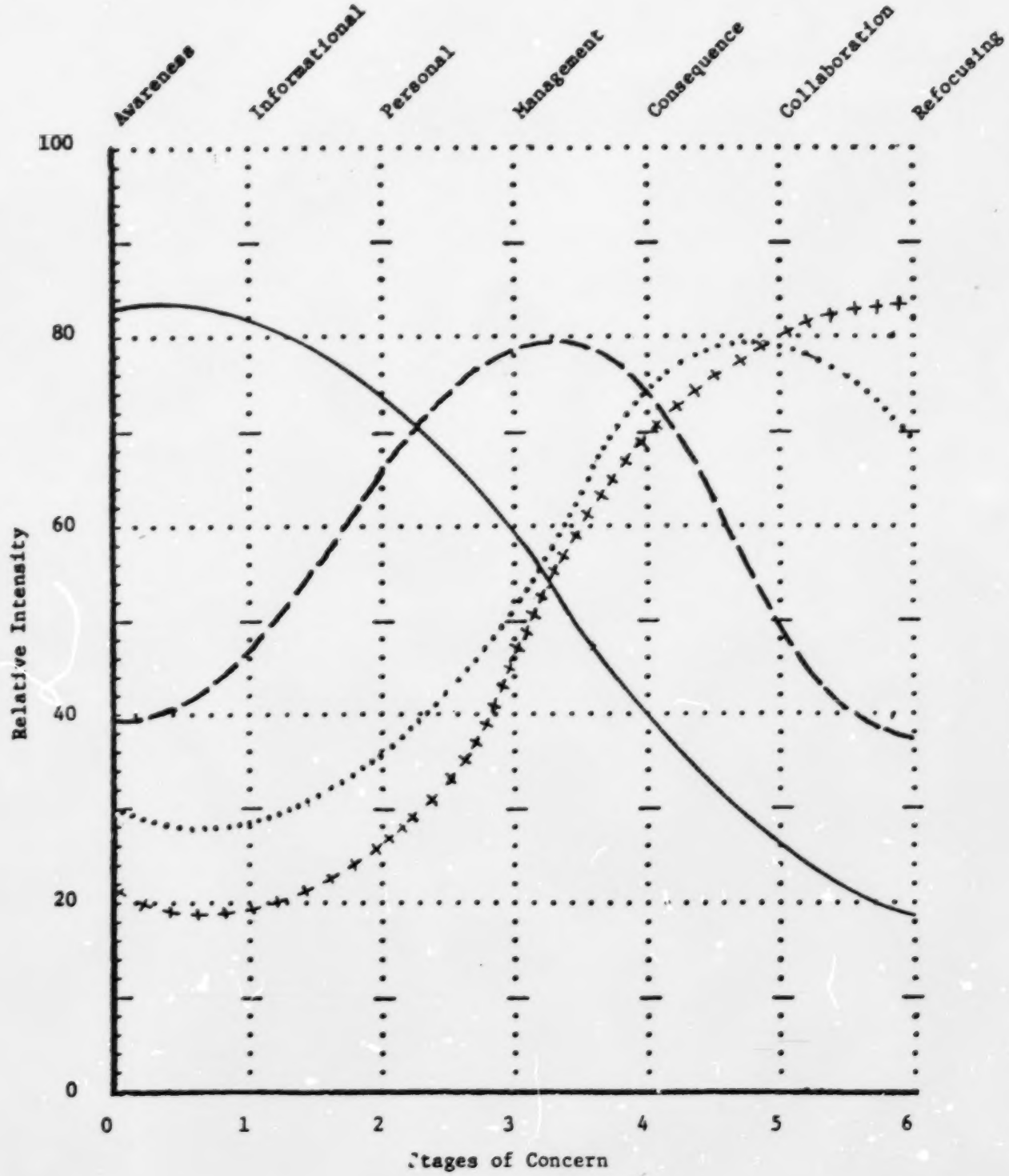
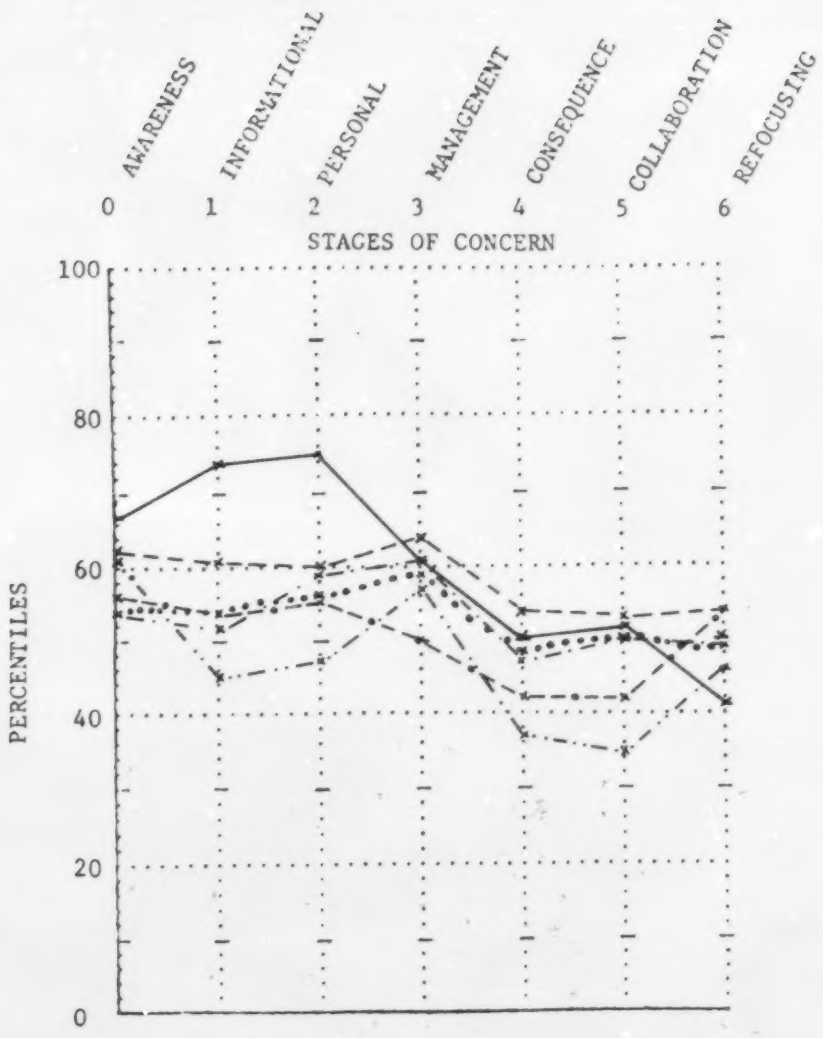


Figure 5

Stages of Concern
Total Group
N = 42



Sept. '76 _____

Jan. '77 ----------

April '77 . . . . . .

Aug. '77 -.-.-.-.-.-.

Oct. '77 ..-..-..-..-

April '78 --.--.--.--.

Data Interpretation, Question 1. The Levels of Use data from the present study are consistent with previous LoU research (Hall & Loucks, 1977b). Typically, the majority of first time users of innovations are at the Mechanical Level of Use (LoU III). With time, the majority of users reach Routine use level, (LoU IVA); this often takes from two to three years. This transition was observed in the present study in the spring of the second year. It is also predictable that a significant number of individuals expected to be users of an innovation will be nonusers (Hall & Loucks, 1977b). This fact is reflected by the 19% who were not using the innovation at the end of the two year study.

As noted previously, the Stages of Concern of the sample showed some indication of the expected "wave motion". The first set of data did produce a typical nonuser profile. Although Stages 0, 1, and 2 decreased as predicted, no other stages became particularly dominant. Stage 3 scores did remain higher than others throughout the two years, indicating that the innovation posed a number of management difficulties making it problematic to implement. No observed increase in Stage 4 and 5 scores indicates that teachers as a group never focused on the innovation's impact on students. However, the increasing Stage 6 score, coupled with a persistent higher Stage 3, indicates some resistence to or distress with using the innovation.

2. How did changes in Levels of Use and Stages of Concern of teachers who eventually became nonusers of the program differ from those who remained users?

According to the LoU data, at the close of the second year of the implementation effort, 19% of the study sample was not using the innovation. The question was then asked whether or not the nonusers' concerns also differed from the user group. Comparing user and nonuser concerns profiles did uncover

some important differences.

Figures 6 and 7 present separate SoC profiles for users and nonusers. Users are defined as being at LoU III or above at the last data collection period; nonusers were at LoU II or below at this time. (No profile is shown for September, 1976, since everyone was a user according to minimal criteria used at that time, or for August, 1977, because LoU interviews were not conducted then.) The two groups differed considerably, particularly on Stages 0, 4, and 5. Nonusers had a very high Stage 0 score (Figure 7), and their Stages 4 and 5 scores were considerably lower than those of users.

Data Interpretation, Question 2. It appears that individuals who became nonusers of the innovation had a somewhat different developmental pattern of concerns than did users. Most striking is their high score on Stage 0. This high score is interpreted as the expression of little or no concern about the innovation and little, if any, interest in it. This interpretation is further supported by the very low Stage 4 and 5 scores, indicating low concern for the innovation's effects on students and overall lack of commitment to it. This pattern is a general one for nonusers and has been found to describe nonusers in other settings who are either openly or covertly resistant to the change (Hall, George, & Rutherford, 1977).

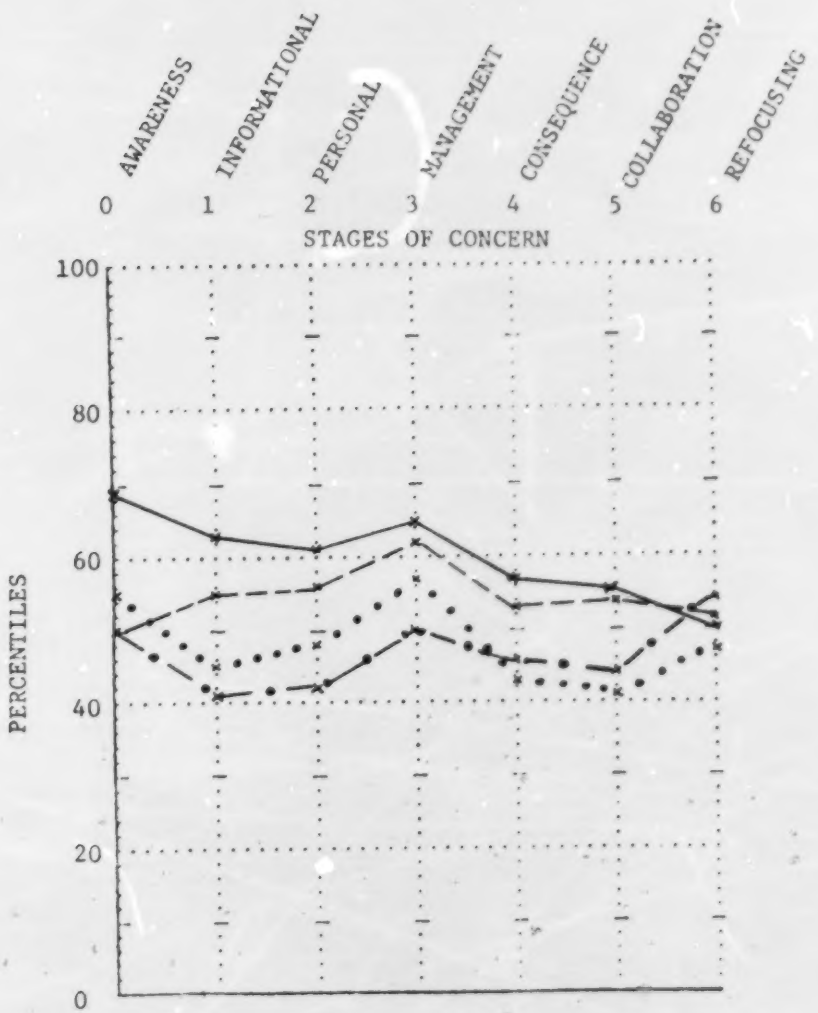
3. Are there differences in Levels of Use and Stages of Concern of different teaching teams?

Within the junior high school, teachers were grouped across disciplines into ten teaching teams. Figures 8 and 9 present longitudinal data for two of these teams. These data illustrate that different teaching teams did change in their concerns and use of the innovation over the course of the implementation effort in different ways.

Team 1's profile best represents the changes in concerns experienced by

Figure 6

Stages of Concern Data for Users of the Innovation



Jan. '77 _____

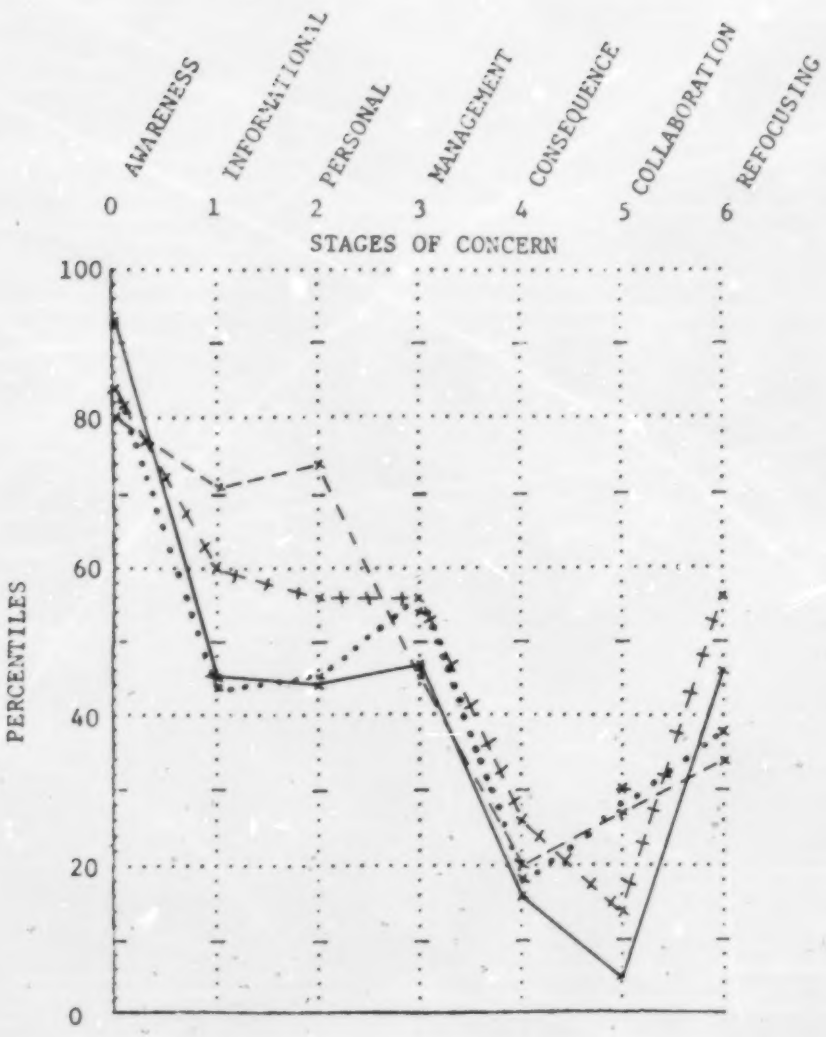
April '77 ---------

Oct. '77 .....

April '78 _._._._._

Figure 7

Stages of Concern Data for Nonusers of the Innovation



Jan. '77 _____

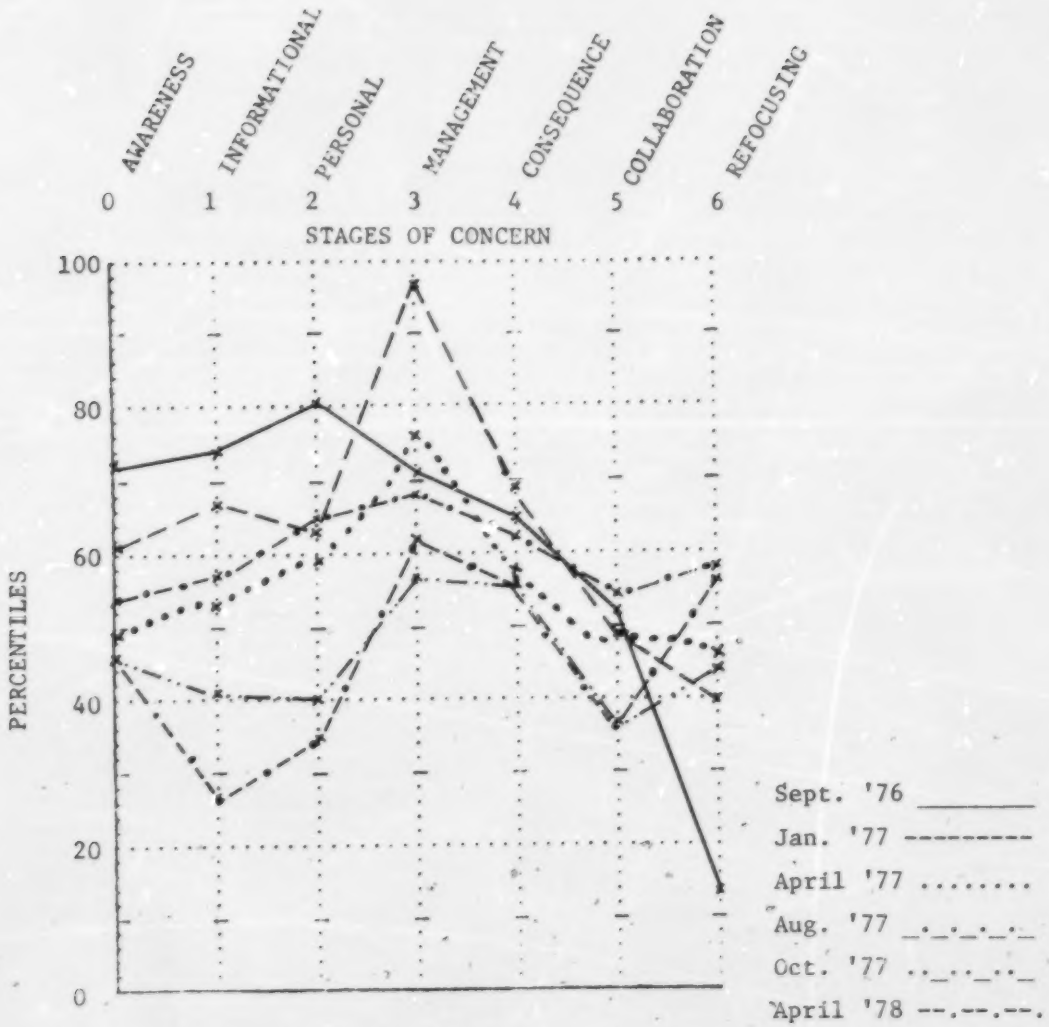
April '77 - - - - - - -

Oct. '77 .....

April '78 + + + + +

Figure 8

Stages of Concern for Team 1

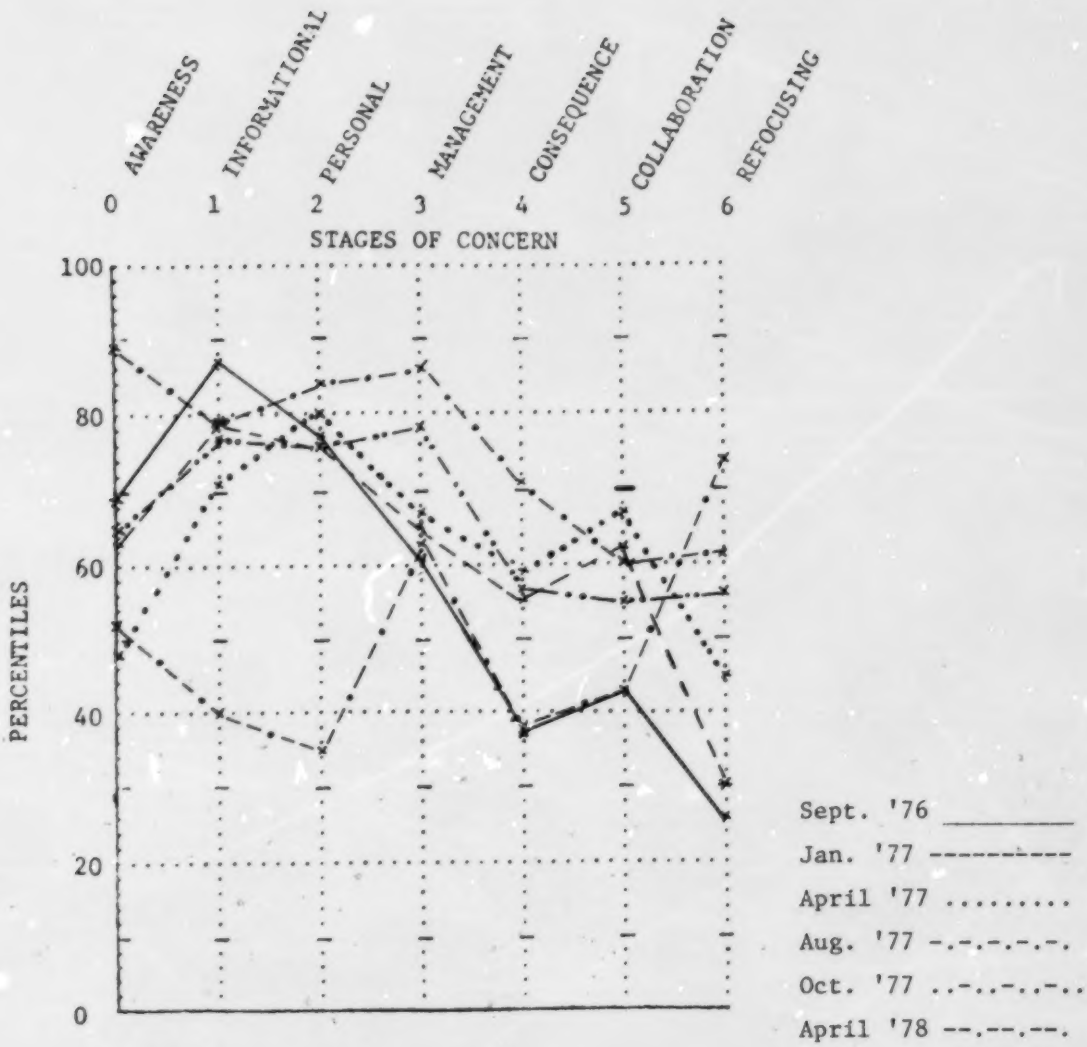


Levels of Use Distribution--Team 1
(N = 4)

LoU	9/76	1/77	4/78	10/77	4/78
III	75%	50%	35%	25%	-
IVA	-	-	-	50%	50%
IVB	25%	25%	-	-	25%
V	-	25%	-	25%	25%
VI	-	-	25%	-	-

Figure 9

Stages of Concern for Team 2



Levels of Use Distribution--Team 2
(N = 4)

LoU	9/76	1/77	4/78	10/77	4/78*
III	75%	50%	25%	25%	25%
IVA	25%	25%	50%	50%	50%
IVB	-	25%	25%	-	-
V	-	-	-	25%	-

*lost teacher midyear 1978

most individuals involved in this particular implementation effort. At the beginning of the effort, the Stages of Concern profile indicated that concerns were high on Stages 0-3 and almost equal in intensity, and were much lower and less intense for Stages 4-6. Three of the teachers were at LoU III and one at LoU IVB.

By January, 1977, Stage 3 concerns had elevated very dramatically while concerns at Stages 0-2 had decreased somewhat and were now about equal in intensity to Stage 4. In April, the overall intensity for the profile was lower, but Stage 3 was still much higher than other stages. LoU ratings in January and April, respectively, were two III's, one IVB, one V, three III's, and one VI.

In August, 1977, Stage 3 scores were somewhat lower, although Stage 3 did remain the highest stage. The profile was basically flat (around the 60 percentile), i.e. there were no extremely intense concerns. By October, 1977, there was a substantial drop in the overall intensity of concerns in the SoC profile, and Stage 4 was now identical to Stage 3. In fact, had it not been for one subject on the team whose Stage 3 score was very high, Stage 4 concerns would have been higher than Stage 3 for this aggregated data. Thus, in this team, Stage 3 concerns diminished and concerns about consequence (Stage 4) emerged, as change agents would hope for by the second year. All stages, other than 3 and 4, were about equal.

In April, 1978, Stages 3 and 4 concerns remained almost equal, with the intensity of Stage 3 concerns slightly greater than Stage 4. Stage 6 concerns at this time were as high as Stage 4 concerns. LoU ratings were IVB, V, and two IVA's.

In contrast to the team described above, Team 2 experienced a different development in concerns. The data of September, 1976, produces a very typical

nonuser profile, with Stages 0, 1, and 2 more intense than other stages (Figure 9). Stage 1 concerns were higher than Stage 2 concerns, indicating an interest in learning more about the innovation, without feelings of undue threat, as would have been suggested by the reverse (Hall, George & Rutherford, 1977). At this time, three people were at LoU III. However, from the interviews it was determined that the teachers at LoU III had just begun use and had not yet experienced any frustration with innovation management. By January, 1977, the SoC profile resembled more closely a user profile, with the elevation in concerns at Stages 3, 4, and 5. However, it still retained characteristics of a nonuser profile, with the high Stage 1 and 2 concerns. Stage 6 remained the lowest stage, as it was in September at the first testing.

By April, 1977, the SoC profile appeared even more like a user's profile. Stage 3 and 5 concerns were equally intense, and concerns at Stage 4 were not much lower. Stage 1 concerns appeared to be at about the same level as concerns at Stages 3 and 5. All teachers were higher on Stage 2 than other stages.

By the time of the fourth testing, (October, 1978) Stage 3 concerns were higher than were others. Concerns on Stage 6 were now equal in intensity to those on Stages 4 and 5.

In April, 1978, Stage 6 and 3 concerns increased considerably and became predominant.

Data Interpretation, Question 3 . The changing concerns and use levels of Teams 1 and 2 serve to illustrate two contrasting cases in this implementation effort. As noted, Team 1's concerns are more typical of those for the entire sample than are those of Team 2. The quickly emerging and remaining high Stage 3 concerns of Team 1 express the difficulty in management of this particular innovation. Although Stage 4 concerns do increase and eventually equal Stage 3 concerns in intensity, the belief is reinforced that, even when

teachers did focus on the consequences of the innovation for students, they could not, at the end of two years, be completely comfortable with management requirements. The upswing in Stage 6 concerns at the end of the study suggests that, perhaps, one reason for the continued high level of Management concerns was due to the team's efforts to refine the innovation. This hypothesis is given further confirmation by the associated higher Levels of Use.

In contrast, Team 2's personal concerns (Stage 2) remained as high as Management (Stage 3) concerns, indicating a certain discomfort with how the innovation affected them, perhaps a reflection of the fact that the innovation was highly value-laden. Also, the continuing high Stage 1 concerns may have been a function of the relatively undefined nature of the innovation. When in October, 1977, the Stage 6 concerns became equal to Stages 4 and 5, a note of caution might have been in order. By April, 1978, the very high Stages 6 and 3 signalled a real change in concerns. For the most part, it was an indication of the frustration of the teachers in management of the innovation and a signal that they were seeking "a way out."

4. Are there discernable patterns to the changes in the Levels of Use and Stages of Concern of individuals within the sample?

Figure 10 reports the Levels of Use ratings over time for the 42 individuals who participated in the study for its duration. There appear to be some patterns in the changing Levels of Use. Thirteen teachers (31% of the sample) increased in their LoU over time (e.g., Teacher 2: III, III, IVA, IVA, V). Eleven others (26%) showed a general increase, with a decrease to LoU IVA Routine at one time or another (e.g., Teacher 3: III, IVA, IVB, IVA, V). Seven individuals (17%) decreased in LoU over time (e.g., Teacher 16: III, III, I, 0, 0). Only one individual remained stable (Teacher 42). Of the total forty-two teachers in the sample, twenty-two (52%) never reached a higher LoU level than IVA, Routine.

Figure 10

Levels of Use of Individuals Remaining in the Sample
Over the Five Data Collection Periods
N = 42

Teacher	9/76	1/77	4/77	10/77	4/78
1	III	III	V	V	V
2	III	III	IVA	IVA	V
3	III	IVA	IVB	IVA	V
4	III	IVA	V	V	V
5	III	III	IVA	IVB	IVA
6	III	III	III	IVA	IVA
7	IVA	IVA	III	IVA	IVA
8	IVA	IVA	IVB	I	IVA
9	IVA	IVA	IVA	V	IVA
10	III	IVA	IVA	III	IVA
11	IVA	IVA	V	IVA	IVA
12	III	IVA	V	V	IVA
13	III	III	0	I	III
14	III	0	0	0	0
15	III	0	IVA	0	0
16	III	III	I	0	0
17	IVB	IVA	IVA	IVA	IVA
18	IVB	V	VI	V	IVB
19	III	III	III	III	IVA
20	III	IVB	III	IVA	V
21	III	IVA	IVA	V	IVA
22	III	III	III	V	IVA
23	III	III	IVA	0	0
24	III	IVB	IVB	V	IVA
25	III	III	IVA	IVA	IVA
26	III	0	0	0	0
27	III	IVA	IVA	IVA	IVA
28	III	IVA	IVA	IVB	IVA
29	IVB	III	IVB	IVA	IVA
30	III	III	IVB	IVB	III
31	III	III	III	IVA	IVA
32	III	IVA	0	0	0
33	III	IVA	IVA	IVA	IVA
34	III	IVA	IVA	IVA	IVA
35	IVA	III	III	III	III
36	IVA	III	0	0	0
37	III	III	III	I	0
38	III	III	III	-	IVA
39	III	V	V	IVA	V
40	III	IVA	IVA	IVA	IVA
41	V	IVA	IVB	IVB	IVA
42	IVA	IVA	IVA	IVA	IVA

Individual Stage of Concern profiles were also analyzed for patterns of change over time and none were discernable. There is neither consistency nor pattern to the change in the high stages of Concern for individuals within the group.

Data Interpretation, Question 4. The changes in Levels of Use for individuals are fairly typical of users of other innovations that have been the focus of previous research (Hall & Loucks, 1977a). Gradual movement to LoU IVA (Routine) and the reversion to this level from higher levels is not unusual.

The lack of discernable patterns in individual concerns over time points out one particularly important principle: at any one point in time, any one individual's concerns cannot be predicted from those of a group and visa versa. Although group profiles can give a general picture, indications of some general trends or "trouble spots," each individual has a unique concerns profile which might deviate from that of the total group.

Discussion

This paper seeks to describe how individual teachers, who were the target of an implementation effort, changed over time in their use of and concerns about a new approach to discipline. The end result indicates that a majority of teachers were using the innovation in a routine way at the end of the effort, although a significant number still remained nonusers. Individual concerns reflected management problems, time and logistical issues that remained unresolved. Some unhappiness and discontent with the program also appeared to be obvious at the end of the effort.

Many reasons can be advanced for the state of the user system two years after implementation began. The innovation itself was highly complex, involving the adoption of a particular set of values that may or may not have been consistent with the teachers' own value systems. The innovation also lacked

clear definition, and required a considerable commitment of time and energy by the teachers.

The reader is referred to other papers, particularly those by Zigarmi (1979) and Rutherford (1979) for an in-depth understanding of the setting and of the interventions that occurred over the course of the two years. Only by studying the relationship between actions to facilitate the process and the corresponding changes in the individual teachers, can implementation be understood and can future change efforts be approached in more informed and sensitive ways.

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